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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/725,384	11/29/2000	James M. Ziobro	D/A0125Q XER 2 0404	6573

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EXAMINER

HARRISON, CHANTE E

ART UNIT PAPER NUMBER

2628

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/725,384

Applicant(s)

ZIOBRO, JAMES M.

Examiner

Chante Harrison

Art Unit

2628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4-16 and 19-23 is/are rejected.
- 7) ☒ Claim(s) 17 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 1-16-07
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is responsive to communications: Request for Reconsideration, filed on 11/13/06.
2. Claims 4-23 are pending in the case. Claims 4, 10 and 21 are independent claims.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 4-9 and 21-23 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 4 and 21 do not include claim language which indicates a manipulation of data for output to computer display that physically transforms the article or object to a different state or thing. Therefore the claim language does not present a practical application by physical transformation or production of a useful, concrete and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 4-6, 10-16, 19-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Hiroshi Kaburagi et al, US 5,680,230, 10/1997.

As per independent claim 4, Kaburagi discloses collecting histogram information from the multi-color color space image (col. 21, ll. 45-47) wherein bins ("816") within the histogram classify image pixels based on luminance information and hue information (col. 7, ll. 63-65); classifying peaks within the histogram that have similar luminance as conflicting colors (col. 13, ll. 45-51); and applying at least one distinct spatial modulation (i.e. pattern) (Fig. 46 & 47) to, and only to, at least one respective single colorant version of at least one of the conflicting colors (col. 31, ll. 35-41; col. 31-32, ll. 65-4), thereby ensuring that all single colorant versions of colors in the image are visually distinguishable from one another (col. 32, ll. 8-13) while minimizing distortions in a remainder of the single colorant version of the image (col. 32, ll. 14-20).

As per dependent claim 5, Kaburagi discloses before classifying, locating peaks within the histogram data (col. 13, ll. 45-50).

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As per dependent claim 6, Kaburagi discloses wherein applying spatial modulation further comprises associating a unique modulation to the single colorant versions of each of the conflicting colors (Fig. 46 & 47; col. 31, ll. 35-41; col. 31-32, ll. 65-4).

As per independent claim 10, Kaburagi discloses an image analyzer operative (i.e. density distribution detection means) (col. 15, ll. 22-25) to find and classify conflicting colors in the color image (col. 13, ll. 45-51); and a gray scale modulator ("3708") operative to add spatial modulations (Fig. 46 & 47) to single colorant versions of only the conflicting colors within the single colorant version of the color image (col. 31, ll. 35-41; col. 31-32, ll. 65-4).

As per dependent claim 11, Kaburagi discloses a histogram collector ("816") operative to classify pixels in the color image (col. 13, ll. 45-51) based on a characteristic (i.e. luminance/density) that is also used to generate the single colorant version of the color image (col. 31, ll. 35-41; col. 31-32, ll. 65-4).

As per dependent 12, Kaburagi discloses a conflicting color detector (i.e. color separation table) operative to examine the histogram (col. 19, ll. 60-65) and find pixels that are similar with respect to the characteristic (col. 13, ll. 20-27, 45-51) that is used to generate the single colorant version of the image (col. 31, ll. 35-41; col. 31-32, ll. 65-4).

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As per dependent claim 13, Kaburagi discloses a color relationship discriminator (i.e. discrimination means) operative to receive conflicting color classification information from the image analyzer and color image pixel information, the color relationship discriminator operative to determine a relationship between the color image pixel and the conflicting color (col. 22, ll. 40-52).

As per dependent claim 14, Kaburagi discloses a spatial modulation attenuator (i.e. input level dividing means) operative to attenuate a gray scale modulation based on the relationship between the color image pixel and the conflicting color (col. 31-32, ll. 63-11).

As per dependent claim 15, Kaburagi discloses a spatial modulation generator operative to generate a gray scale spatial modulation for application to a single colorant version of a color (Fig. 46 & 47; col. 31, ll. 35-41; col. 31-32, ll. 65-4).

As per dependent claim 16, Kaburagi discloses the relationship between the conflicting color and the color image pixel comprises a **color distance** (i.e. a color range difference with respect to a reference axis of a color space) within a color space (col. 15, ll. 7-20).

As per dependent claim 19, Kaburagi discloses wherein the image processor further comprises an image receiver (i.e. copy machine) (Fig. 1 "100").

As per dependent claim 20, Kaburagi discloses wherein the image receiver further comprises a xerographic printer (Fig. 31).

As per independent claim 21, Kaburagi discloses examining the image to find conflicting colors in the image (col. 13, ll. 19-24); creating a single colorant version of the image (col. 31, ll. 35-41; col. 31-32, ll. 65-4); and selectively (col. 31, ll. 35-37) spatially modulating a portion of the single colorant version of the image that is associated with one of the conflicting colors (Fig. 46 & 47).

As per dependent claim 22, Kaburagi discloses collecting a histogram of the multicolor image pixels (col. 21, ll. 45-47) wherein histogram bins ("816") tally and sort pixels based on at least one characteristic (col. 19-20, ll. 55-5); and examining the histogram to find color peaks that are similar in the at least one characteristic (col. 13, ll. 45-51).

As per dependent claim 23, Kaburagi discloses examining the image to find color peaks in the image that have similar lightness (L^*) (col. 13, ll. 29-31; 41-51).

1. Claims 17 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

2. Applicant's arguments, see pp. 3, Para 2-3, filed 11/13/06, with respect to the rejection(s) of claim(s) 4 and 10 under U.S.C 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Hiroshi Kaburagi et al, US 5,680,230, 10/1997.

Conclusion

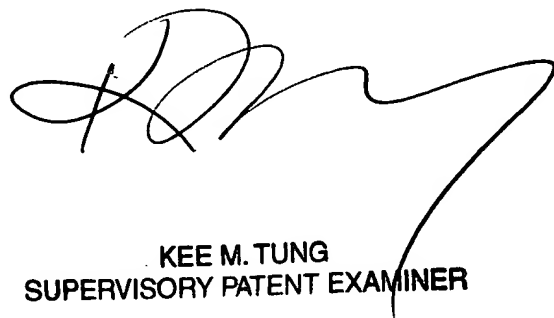
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chante Harrison whose telephone number is 571-272-7659. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on 571-272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Chante Harrison
Examiner
Art Unit 2628

Ch
February 28, 2007



KEE M. TUNG
SUPERVISORY PATENT EXAMINER